

## **RESPONSE**

### **Pending Claims**

Claims 29-33, 39-42 and 52 are pending. Claims 29-33, 39-42 and 52 are amended herein. Support for the claims may be found throughout the specification and at least at Figure 1. No new matter is added by this amendment.

### **Claim 30 Is Rejected Under 35 U.S.C. § 112, Second Paragraph**

Claim 30 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinguish the invention. The Examiner asserts that the claim lacks proper Markush group language. Applicants respectfully submit that the rejection is moot in view of the amendment to the claim and respectfully requests that the rejection be reconsidered and withdrawn.

### **Claims 29-33, 39-42 and 52 Are Rejected Under 35 U.S.C. § 102 (e) (Lee)**

Claims 29-33, 39-42 and 52 are rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,306,169 ("Lee"). The Examiner asserts that Lee discloses a cartilage matrix comprising at least one surface part carrying a composition (first matrix or second matrix) comprising at least one stimulation molecule) which induces signal transduction in chondroblast/chondrocytes and which is selected from collagen proteins, proteoglycans, and non-collagenous proteins.

Applicants traverse the rejection. Lee discloses a tissue implant, of which an integral part is a second matrix component containing a population of cells (see Claim 1 and col. 4, line 47-50), which is immobilised in the second matrix component (see col. 7, line 45-46). Such an implant is used to provide mechanical strength to damaged cartilaginous tissues (see col. 1, line 10-24). Methods which can be used to attach and immobilise the cells are described in col. 10, lines 7-53 of Lee. It is therefore clear that such cells are a fundamental part of the tissue implant as described by Lee.

The present invention, however, relates to a membrane which does not contain immobilised or attached cells, but is simply a cartilage membrane. The claims, as amended, recite a "cell-free" membrane, and as such, are not anticipated by the disclosure of Lee. Accordingly, Applicants

respectfully request that the rejection be reconsidered and withdrawn.

**Claims 29-33, 39-42 and 52 Are Rejected Under 35 U.S.C. § 102 (e) (Vibe-Hansen)**

Claims 29-33, 39-42 and 52 are rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 5,989,269 ("Vibe-Hansen"). The Examiner asserts that Vibe-Hansen discloses a cartilage membrane comprising at least one surface part carrying a composition comprising at least one stimulation molecule which induces signal transduction in chondroblast/chondrocytes and which is selected from collagen proteins, proteoglycans and non-collagenous proteins.

Applicants respectfully traverse the rejection. The disclosure of Vibe-Hansen describes a method, instruments and kit for transplantation comprising a hemostatic barrier, transplanted material (e.g., chondrocyte cells) and a covering patch (see Fig. 3C). The hemostatic barrier may be coated with an organic glue, of which Tisseel is given as an example (see col. 3, line 25-28 and col. 6, lines 45-55). Tisseel is said to contain fibronectin and fibrinogen, among other components (col. 6, lines 52-55). The Examiner assumes that because Tisseel contains fibronectin and fibrinogen, it must have the same function as a stimulation molecule in the present invention. However, this assumption is unfounded. Enclosed are extracts from an article by Mats Brittberg et al. entitled "*The influence of fibrin sealant (Tisseel®) on osteochondral defect repair in the rabbit knee*", which was published in the journal Biomaterials, Vol. 18 (3) (1997) pp. 235-242. The authors conclude that, "...a fibrin adhesive like Tisseel® is not suitable as a scaffold to promote repair of osteochondral defects in the rabbit knee." and, accordingly, although Tisseel contains fibronectin and fibrinogen, these compounds cannot induce signal transduction in this form. Therefore, Tisseel does not behave as a "stimulation molecule" as defined in the present invention and the reference does not anticipate the claims. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

**Claims 29-31, 39-42 and 52 Are Rejected Under 35 U.S.C. § 102 (e) (Minuth)**

Claims 29-31, 39-42 and 52 are rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,187,053 ("Minuth"). The Examiner asserts that Minuth discloses a cartilage membrane comprising at least one surface part carrying a composition comprising at least one

stimulation molecule which induces signal transduction in chondroblast/chondrocytes and which is selected from collagen proteins, proteoglycans and non-collagenous proteins.

Applicants traverse the rejection. Minuth describes a process for producing a natural implant comprising a porous carrier, a film-like cell base, cells and a coating material (see Claim 1, Fig. 5 and col. 1, lines 33-55). Claims 8 and 9 and col. 3, lines 10-12 describe embodiments in which the film-like cell base is coated with a medium which promotes adhesion of the cells to the film-like cell base, such as fibrin cement, collagen, natural blood coagulate, etc. The implant provides support for the cells (col. 1, lines 33-35) and has the correct surface shape to make contact with the natural tissue (see col. 2, lines 15-18). It is therefore evident that the cells form an integral part of the natural implant. As before, the present invention describes a membrane which does not contain immobilised or attached cells, but is simply a cartilage membrane. The claims as amended describe a "cell-free" membrane, and as such, are not anticipated by the disclosure of Minuth. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

### CONCLUSION

Applicants submit that all claims are allowable as written and respectfully request early favorable action by the Examiner. If the Examiner believes that a telephone conversation with Applicants' attorney would expedite prosecution of this application, the Examiner is cordially invited to call the undersigned attorney of record.

Respectfully submitted,

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